| ERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8) plicant(s): Yasushi AKIYAMA et al. |  |  | Docket No. <b>2002JP311</b> |
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| Serial No.<br>10/519,242  | Filing Date December 22, 2004            | Examiner WU, Ives J.                       | Group Art Unit              |
| P 1 6 2005  | ION FOR ANTIREFLECTIVE CO                | ATING AND METHOD F                         | OR FORMING SAME             |
| hereby certify that th  | is <u>English Language abstract of J</u> | (Identify type of correspondence)          | envelope addressed to: Th   |
| commissioner of Pate  | ents and Trademarks, Washington,         | D.C. 20231-0001 on                         | September 14, 2005 (Date)   |
|   |  | MARIA T. S (Typed or Printed Name of Perso |                             |
|   |  | (Signature of Person Mail                  | Jana<br>ing Correspondence) |
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(21)Application number: 09-292051 (71)Applicant: ASAHI GLASS CO LTD

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## (54) COATING COMPOSITION

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a composition which has a low refractive index suitable for antireflecting film on a photoresist surface and can be completely removed by developer during developing of the photoresist by using a fluorine-based polymer containing a specific polymerization unit.

SOLUTION: A fluorine-based polymer to be used contains a polymerization unit represented by -CF2CF(ORfCOOM)- or both the above polymerization unit and a polymerization unit represented by -CF2CFX- (Rf is a linear or branched perfluoroalkylene which may contain an ether oxygen; -COOM includes -COOH, -COOY (Y is a non-substituted or substituted ammonium ion) and -COOH.Z (Z is an amine); and X includes fluorine and chlorine). Number average molecular weight of the fluorine-based polymer is preferably 1×103-3×104. A solvent to be used is water, an organic solvent or a mixture of water and an organic solvent.

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